What is claimed is:

1. A cation exchange chromatography process for purifying a peptide from a mixture comprising said peptide and related impurities, the process comprising the steps of:

5   a) eluting said related impurities of said mixture in a solution comprising an organic modifier, water, optionally a salt component and optionally a buffer, at a linear or step gradient or isocratically in salt component, and at pH-values optionally maintained with a buffer so that said peptide has a positive local or overall net charge and said related impurities have a local or overall positive net charge which is lower than the positive net charge of said peptide so

10   as to remove said related impurities; and

b) subsequently, eluting said peptide by a step or linear change to an aqueous solvent optionally with a salt component, at the same or higher pH-values optionally maintained with a buffer.

15   2. An anion exchange chromatography process for purifying a peptide from a mixture comprising said peptide and related impurities, the process comprising the steps of:

a) eluting said related impurities of said mixture in a solution comprising an organic modifier, water, optionally a salt component and optionally a buffer, at a linear or step gradient or isocratically in salt component, and at pH-values optionally maintained with a buffer so that

20   said peptide has a negative local or overall net charge and said related impurities have a local or overall negative net charge which is lower than the negative net charge of said peptide so as to remove said related impurities; and

b) subsequently, eluting said peptide by a step or linear change to an aqueous solvent optionally with a salt component, at the same or lower pH-values optionally maintained with a

25   buffer.

3. An industrial method for producing a pure peptide, the method including a cation exchange chromatography process for purifying a peptide from a mixture comprising said peptide and related impurities, the method comprising the steps of:

30   a) eluting said related impurities of said mixture in a solution consisting essentially of an organic modifier, water, optionally a salt component and optionally a buffer, at a linear or step gradient or isocratically in salt component, and at pH-values optionally maintained with a buffer so that said peptide has a positive local or overall net charge and said related impuri-

ties have a local or overall positive net charge which is lower than the positive net charge of said peptide so as to remove said related impurities; and

b) subsequently, eluting said peptide by a step or linear change to an aqueous solvent optionally with a salt component, at the same or higher pH-values optionally maintained with a

5   buffer.

4. An industrial method for producing a pure peptide, the method including an anion exchange chromatography process for purifying a peptide from a mixture comprising said peptide and related impurities, the method comprising the steps of:

10   a) eluting said related impurities of said mixture in a solution consisting essentially of an organic modifier, water, optionally a salt component and optionally a buffer, at a linear or step gradient or isocratically in salt component, and at pH-values optionally maintained with a buffer so that said peptide has a negative local or overall net charge and said related impurities have a local or overall negative net charge which is lower than the negative net charge

15   of said peptide so as to remove said related impurities; and

b) subsequently, eluting said peptide by a step or linear change to an aqueous solvent optionally with a salt component, at the same or lower pH-values optionally maintained with a buffer.

20   5. A method for isolating a peptide, the method including purification of a peptide from a mixture containing said peptide and related impurities via a cation exchange chromatography process, the cation exchange chromatography process comprising the steps of:

a) eluting said related impurities of said mixture in a solution comprising an organic modifier, water, optionally a salt component and optionally a buffer, at a linear or

25   step salt component gradient or isocratically, and at pH-values optionally maintained with a buffer so that said peptide has a positive local or overall net charge and said related impurities have a local or overall positive net charge which is lower than the positive net charge of said peptide so as to remove said related impurities,

b) subsequently, eluting said peptide by a step or linear change to an aqueous sol-

30   vent optionally with a salt component, at the same or higher pH-values optionally maintained with a buffer;

and subsequently, if necessary, subjecting to analytical tests and/or further purification, and isolating said peptide in a conventional manner.

6. A method for isolating a peptide, the method including purification of a peptide from a mixture containing said peptide and related impurities via an anion exchange chromatography process, the anion exchange chromatography process comprising the steps of:

    a) eluting said related impurities of said mixture in a solution comprising an organic modifier, water, optionally a salt component and optionally a buffer, at a linear or step salt component gradient or isocratically, and at pH-values optionally maintained with a buffer so that said peptide has a negative local or overall net charge and said related impurities have a local or overall negative net charge which is lower than the negative net charge of said peptide so as to remove said related impurities,

    b) subsequently, eluting said peptide by a step or linear change to an aqueous solvent optionally with a salt component, at the same or lower pH-values optionally maintained with a buffer;

and subsequently, if necessary, subjecting to analytical tests and/or further purification, and isolating said peptide in a conventional manner.

7. The process of claim 1, wherein said peptide to be purified is selected from polypeptides, oligopeptides, proteins, receptors, vira, as well as homologs, analogs and derivatives thereof.

8. The process of claim 1, wherein said peptide to be purified is selected from glucagon, hGH, insulin, FactorVII, FactorVIIa, FactorVIIai, FFR-FactorVIIa, glucagon-like peptide-1, glucagon-like peptide-2 and analogs, as well as derivatives thereof.

9. The process of claim 1, wherein the ratio of organic modifier to water on a weight percent basis is from 1:99 to 99:1.

10. The process of claim 1, wherein the organic modifier is selected from C_{1-6}-alkanol, C_{1-6}-alkenol, C_{1-6}-alkynol, urea, guanidine, C_{1-6}-alkanoic acid, C_{2-6}-glycol, or C_{3-7}-polyalcohol.

add A2